Controlling the web with a PS5 Controller
Yes, I got a PS5 at a flash sale.

No, I am not a gamer.
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harshil.dev

Developer Advocate @ Contentful
Mozilla Rep
Experimentalist
Agenda

🌟 Introduction
🛠 Implementation
😄 Live coding
🎮 Demo
Web APIs
Third-party API

- Not built in the browser
- Interact with a web server
- Eg. YouTube API, Telegram API, Contentful API

Browser API

- Built in the browser
- Extend the capability of the browser
- Eg. Web Audio API, Web Storage API, WebHID API
WebHID API

Experimental
Human Interface Device (HID) is a bi-directional communication device.
const devices = await window.navigator.hid.requestDevice({
    filters: [{ vendorId: , productId: }]
})

http://www.linux-usb.org/usb.ids
const devices = await window.navigator.hid.requestDevice({
    filters: [{ vendorId: , productId: }],
    exclusionFilters: [{ vendorId: , productId: }]
})
Get Connected Devices

```javascript
const devices = await navigator.hid.getDevices();
```
HIDDevice Interface

{
    collections: [{...}],
oninputreport: null,
onopened: false,
productId: 3302,
productName: "Wireless Controller",
vendorId: 1356
}

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Open Connection

await device.open()
Data

Report

- Input Report
- Output Report
- Feature Report
Listen to input

device.addEventListener("inputreport", e => {
  const { data, reportId } = e;
  ...
});
Listen to input

device.oninputreport = async (e) => {
  const {data, device, reportId} = await e;
  ...
}
Connect Event

```javascript
navigator.hid.addEventListener('connect', ({device}) => {
    console.log(device);
    ...
});
```
navigator.hid.addEventListener('disconnect', ({device}) => {
  console.log(device);
  ...
});
Close Connection

await device.close();
Revoke Access

await device.forget();
## Browser Compatibility

### Table: Browser Support for HID

<table>
<thead>
<tr>
<th>Feature</th>
<th>Chrome</th>
<th>Edge</th>
<th>Firefox</th>
<th>Opera</th>
<th>Safari</th>
<th>Chrome Android</th>
<th>Firefox for Android</th>
<th>Opera Android</th>
<th>Safari on iOS</th>
<th>Samsung Internet</th>
<th>WebView Android</th>
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</thead>
<tbody>
<tr>
<td>HID</td>
<td>✔️</td>
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</tbody>
</table>

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**Tip:** you can click/tap on a cell for more information.

- ✔️ Full support
- ❌ No support
- 🔊 Experimental. Expect behavior to change in the future.
Demo

harshil.dev/ps5/mario
Real World Examples

Ergometer Space - https://github.com/tijmenvangulik/ErgometerJS
Remap - https://github.com/remap-keys/remap
Resources

https://nondebug.github.io/webhid-explorer/
https://developer.chrome.com/articles/hid/
https://web.dev/hid-examples/
Thank You!